



25DN6

# BEAM POWER TUBE

Intended for use in equipment having  
series heater-string arrangement

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## GENERAL DATA

### Electrical:

Heater, for Unipotential Cathode:

|                                  |     |                |
|----------------------------------|-----|----------------|
| Voltage. . . . .                 | 25  | ac or dc volts |
| Current. . . . .                 | 0.6 | amp            |
| Warm-up time (Average) . . . . . | 11  | sec            |

For definition of heater warm-up time and method of determining it, see sheet HEATER WARM-UP TIME MEASUREMENT at front of this Section.

Direct Interelectrode Capacitances (Approx.):<sup>0</sup>

|                                                                     |      |         |
|---------------------------------------------------------------------|------|---------|
| Grid No.1 to plate . . . . .                                        | 0.8  | $\mu$ f |
| Grid No.1 to cathode & grid No.3,<br>grid No.2, and heater. . . . . | 22   | $\mu$ f |
| Plate to cathode & grid No.3, grid<br>No.2, and heater . . . . .    | 11.5 | $\mu$ f |

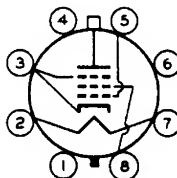
### Characteristics, Class A<sub>1</sub> Amplifier:

|                                                                     |      |      |            |
|---------------------------------------------------------------------|------|------|------------|
| Plate Voltage. . . . .                                              | 50   | 125  | volts      |
| Grid-No.2 (Screen-Grid) Voltage. . . . .                            | 100  | 125  | volts      |
| Grid-No.1 (Control-Grid) Voltage . . . . .                          | 0    | -18  | volts      |
| Mu Factor, Grid No.2 to Grid No.1. . . . .                          | -    | 4.35 |            |
| Plate Resistance (Approx.) . . . . .                                | -    | 4000 | ohms       |
| Transconductance . . . . .                                          | -    | 9000 | $\mu$ mhos |
| Plate Current. . . . .                                              | 240* | 70   | ma         |
| Grid-No.2 Current. . . . .                                          | 30*  | 6.3  | ma         |
| Grid-No.1 Voltage (Approx.) for<br>plate current of 0.5 ma. . . . . | -    | -36  | volts      |

### Mechanical:

Operating Position . . . . . Vertical, base up or down, or  
Horizontal with pins 1 and 3 in vertical plane  
Maximum Overall Length . . . . . 5"  
Seated Length. . . . . 4-1/4"  $\pm$  3/16"  
Maximum Diameter . . . . . 1-9/16"  
Bulb . . . . . T12  
Cap. . . . . Small (JETEC No.C1-1)  
Base . . . . . Short Medium-Shell Octal 8-Pin  
with External Barriers, Style B (JETEC No.B8-118)  
Basing Designation for BOTTOM VIEW . . . . . 5BT

Pin 1 - No Connec-  
tion  
Pin 2 - Heater  
Pin 3 - Cathode,  
Grid No.3  
Pin 4 - No Connec-  
tion



Pin 5 - Grid No.1  
Pin 6 - No Connec-  
tion  
Pin 7 - Heater  
Pin 8 - Grid No.2  
Cap - Plate

<sup>0</sup>,\*: See next page.

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## HORIZONTAL DEFLECTION AMPLIFIER

Maximum Ratings, Design-Center Values Except as Noted:

For operation in a 525-line, 30-frame system<sup>□</sup>

|                                                                                |                   |      |       |
|--------------------------------------------------------------------------------|-------------------|------|-------|
| DC PLATE VOLTAGE . . . . .                                                     | 700               | max. | volts |
| PEAK POSITIVE-PULSE PLATE VOLTAGE<br>(Absolute maximum) <sup>⊕</sup> . . . . . | 6600 <sup>■</sup> | max. | volts |
| PEAK NEGATIVE-PULSE PLATE VOLTAGE . . . . .                                    | 1500              | max. | volts |
| DC GRID-No.2 (SCREEN-GRID) VOLTAGE . . . . .                                   | 175               | max. | volts |
| PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE . . . . .                                | 200               | max. | volts |
| CATHODE CURRENT:                                                               |                   |      |       |
| Peak . . . . .                                                                 | 700               | max. | ma    |
| Average . . . . .                                                              | 200               | max. | ma    |
| GRID-No.2 INPUT . . . . .                                                      | 3                 | max. | watts |
| PLATE DISSIPATION <sup>†</sup> . . . . .                                       | 15                | max. | watts |
| PEAK HEATER-CATHODE VOLTAGE:                                                   |                   |      |       |
| Heater negative with respect to<br>cathode . . . . .                           | 200               | max. | volts |
| Heater positive with respect to<br>cathode . . . . .                           | 200 <sup>▲</sup>  | max. | volts |
| BULB TEMPERATURE (At hottest point on<br>bulb surface) . . . . .               | 225               | max. | °C    |

## Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For grid-resistor-bias operation<sup>†</sup> . . . 0.47 max. megohm<sup>□</sup> Without external shield.<sup>\*</sup> These values can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.<sup>□</sup> As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.<sup>⊕</sup> This rating is applicable when the duration of the voltage pulse does not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.<sup>■</sup> Under no circumstances should this absolute value be exceeded.<sup>†</sup> It is essential that the plate dissipation be limited in the event of loss of grid-No.1 signal. For this purpose, some protective means such as a cathode resistor of suitable value should be employed.<sup>▲</sup> The dc component must not exceed 100 volts.



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